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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,195	10/16/2003	Lizhang Yang	58829US002	7160
32692	7590	09/27/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			WOOD, KEVIN S	
			ART UNIT	PAPER NUMBER
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DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/687,195	Applicant(s) YANG ET AL.	
	Examiner Kevin S. Wood	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) 15-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/3/05, 2/14/05, 12/6/04, 9/23/04</u> | 6) <input type="checkbox"/> Other: _____ |

9/13/04, 1/23/04

NON-FINAL REJECTION

Election/Restrictions

1. Claims 15-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 9 September 2005.
2. Applicant's election with traverse of claims 1-14 (Group I) in the reply filed on 9 September 2005 is acknowledged. The traversal is on the ground(s) that Groups I and II are so interrelated that a search of one group of claims will reveal art to the other. The applicant argues that separate examination of the claims in Groups I and II would require substantial duplication of work, and even though some additional consideration would be necessary, the restriction between the Groups I and II places an undue burden on the applicant in the form of separate filing fees and additional prosecution costs. This is not found persuasive because the inventions of Groups I and II are independent and distinct from each other. They have acquired a separate status in the art as separate subject for inventive effect and require independent searches (as indicated by the different classification). Many of the features claimed in each group are not shared with the other group, therefore, the search for each of the inventions is not co-extensive particularly with regard to text searching. Further, a reference which would anticipate the invention of one group would not necessarily anticipate or even make

obvious the other group. Finally the consideration for patentability is different in each case. Thus, it would be an undue burden to examine both of the inventions in one application.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 56. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 90. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 6-8 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,367,595 to Jennings et al.

Referring to claim 1, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses a apparatus for arranging optical fibers, the apparatus comprising at least one channel, each channel comprising: an input zone (134) for holding a plurality of fiber optical cables (14), each cable having at least one optical fiber (35); a transition zone (130,128) adjacent to the input zone; an output zone (136) adjacent to the transition zone, the output zone comprising at least one slot (126), each slot having a maximum width that is equal to a

multiple of the optical fiber diameter plus one half optical fiber diameter. See Fig. 1-23 along with their respective portions of the specification. The slot (126) is shown holding securely holding the optical fibers, the maximum width of the slot is clearly less than a multiple of the optical fiber diameter plus one half the optical fiber diameter. Since that multiple could be any whole number, any slot width would meet the claimed limitation.

Referring to claim 2, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses that grooves (122) have a geometry that will not violate the minimum bend radius of the optical fiber. See Fig. 1-23 along with their respective portions of the specification.

Referring to claim 6, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses that the first depth of the input zone has a first depth that is larger than a second depth of the output zone. The channels clearly get narrower (or shorter) as the channels transition from the input to the output zones. See Fig. 1-23 along with their respective portions of the specification.

Referring to claim 7, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses the transition zone has an incline starting from the first depth of the input zone and ending at the second depth of the output zone. The channel clearly gets narrower (and has inclines surfaces as it narrows) as the channels transition from the input to the output zones. See Fig. 1-23 along with their respective portions of the specification.

Referring to claim 8, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses regions disposed along the transition zone (128,130,132). See Fig. 1-23 along with their respective portions of the specification.

Referring to claim 12, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses an indicating means bracketing the transition zone. The reference clearly shows a ridge running along the top and the bottom of the apparatus. See Fig. 5 of the reference. This ridge clearly brackets the transition zone (138,140) and indicates the top and bottom of the apparatus. The limitation of being an indicating means is very broad, almost any component can be said to be indicating something.

Referring to claim 13, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses a plurality of fiber optic cables (14), each having at least one optical fiber, wherein the fiber optic cables are disposed in the input zone (134,142) and the optical fibers are disposed in the transition zone (128,130) and the output zone (126). See Fig. 1-23 along with their respective portions of the specification.

Referring to claim 14, the Jennings et al. reference discloses all the limitations of the claimed invention. The Jennings et al. reference discloses the optical fibers (35) lie parallel to one another in the output zone (126). See Fig. 1-23 along with their respective portions of the specification.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3-5 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,367,595 to Jennings et al.

Referring to claims 3-5, the Jennings et al. reference discloses all the limitations of the claimed invention, except the reference does not specifically disclose that the grooves (126) within the output zone hold non-active optical fibers adjacent to the other optical fibers, nor does the reference disclose that the non-active fibers would be disposed between the active optical fibers or the active optical fibers are disposed in slots between the non-active optical fibers. Since the applicant has not claimed a structural difference between the slots and holding grooves, the only difference appears to be

whether the fiber within each slot/groove is an optical fiber or non-active optical fiber. These limitations appear to be "intended use" limitations. If the prior art is capable of performing the intended use limitation, then it meets the claim. Clearly the Jennings et al. reference is capable of holding a plurality of optical fibers, one within each of the plurality of slots (126). It would be up to the user to choose which optical fiber to make active and which ones have as non-active optical fibers. Any of the optical fibers disclosed within the Jennings et al. reference could be active or non-active at any moment, a non-active optical fiber could be any optical fiber that is not carrying transmitting an optical signal at that moment.

Referring to claims 9-11, the Jennings et al. reference discloses all the limitations of the claimed invention, except the reference does not appear to specifically disclose that the apparatus is fabricated from a low adhesion polymer or a composite comprising a base overcoated with a low adhesion polymer, where low adhesion polymer is tetrafluoroethylene fluorocarbon polymer and the base is fabricated from a metal selected from the group consisting of aluminum, steel, stainless steel, copper and copper alloys. The specification fails to disclose the criticality of fabricating with these claimed materials. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to fabricate the apparatus using a low adhesion polymer or a composite comprising a base overcoated with a low adhesion polymer, where low adhesion polymer is tetrafluoroethylene fluorocarbon polymer and the base is fabricated from a metal selected from the group consisting of aluminum, steel, stainless steel, copper and copper alloys, since it has been held to be within the

general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,421,493 to Burek et al.

U.S. Patent No. 6,072,932 to Bennett et al.

U.S. Patent No. 5,915,055 to Bennett et al.

U.S. Patent No. 5,006,201 to Kaukeinen

Each of these references discloses an apparatus similar to that of the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin S. Wood
Patent Examiner